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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,527	08/02/2005	Franz Starlinger-Huemer	083039-000000US	1526

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EXAMINER
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LEYSON, JOSEPH S

ART UNIT	PAPER NUMBER
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1722

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06/21/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/521,527	Applicant(s) STARLINGER-HUEMER ET AL.	
	Examiner Joseph Leyson	Art Unit 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 13-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-7, 10, 15-17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Barth et al. (U.S. Patent 6,126,100).

Barth et al. (U.S. Patent 6,126,100) teach a device for processing plastic material, including a shredding device 3 arranged in a casing 1, 6, 41 and rotatable around an axis of rotation, which shredding device 3 carries a plurality of knives 37, 42, 43 at its periphery, and an extruder comprising an extruder screw 8, with the casing comprising a feed opening for radially supplying the material to the shredding device 3, wherein in the casing in a vicinity of the shredding device 3 a discharge opening 10 for the delivery of shredded material to the extruder 8 is formed, by means of which opening 10 the shredding device 3 communicates with the extruder screw 8, wherein the shredding device 3 has a horizontal axis of rotation and is arranged above the extruder 8, wherein the knives 37, 42, 43 (note that elements 42 and 43 define helical grooves and/or webs) disposed around the periphery of the shredding device 3 are arranged in a helical manner so that they support the conveyance of synthetic material toward the discharge opening 10 (i.e., fig. 6; col. 8, line 62, to col. 9, line 3), wherein the discharge opening 10 is arranged roughly at the mid-point of the length of the shredding

device 3 (i.e., fig. 6), wherein the axis of rotation of the rotatable shredding device 3 is disposed relative to the rotational axis of the extruder screw 8 at about a right angle (i.e., fig. 6), wherein an air nozzle 44 is provided at the inner wall of the casing, and wherein the shredding device 3 cooperates with a driven slide 30 depending on the load on the axis of rotation of the shredding device 3 (col. 7, lines 60-67). The shredding device 3 and its knives 37, respectively, are moved past the extruder screw 8 nearly contacting (col. 8, lines 49-56) at a relatively small distance which creates gaps between the knives 37 of the shredding device 3 and a helix of the extruder screw 8 which effectively shear the material therebetween. In other words, any material between the knives 37 and the screw 8 will receive shearing action during operation of the device.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 1722

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2, 8, 13, 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barth et al. (U.S. Patent 6,126,100).

Barth et al. (U.S. Patent 6,126,100) disclose the apparatus substantially as claimed, as mentioned above, except for the dimensions as recited by instant claim 2, or for the rotational speed of the extruder screw being adjusted depending on the load of the shredding device as recited by instant claim 8. Barth et al. (U.S. Patent 6,126,100) does disclose that the load on the shredding device (i.e., the force of slider 30 and/or the electric current consumption of the motor 34 of the shredding device 3) and the rotational speed of the extruder (i.e., the electric current consumption of the motor of the extruding) are related variables in controlling flow conditions of the material.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the device of Barth et al. (U.S. Patent 6,126,100) with the dimensions of instant claim 2 because where the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device is not patentably distinct from the prior art device, In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); or to modify the device of Barth et al. (U.S. Patent 6,126,100) wherein the rotational speed of the extruder screw is adjusted

depending on the load of the shredding device determined by the electric consumption of the motor of the shredding device because Barth et al. (U.S. Patent 6,126,100) discloses that such variables are related for controlling the flow conditions of the material.

### ***Response to Arguments***

6. Applicant's arguments with respect to the instant claims have been considered but are moot in view of the new ground(s) of rejection.

Applicants argue that the device for the processing of plastic waste according to the present invention differs from the device disclosed in Barth et al. (U.S. Patent 6,126,100) in that only one shredding device 9 is provided to which plastic waste to be shredded is radially fed, wherein a discharge opening 6 is arranged directly at the shredding device 9. The shredding device 9 communicates with the extruder screw 4 by means of the discharge opening in that the shredding device 9 delivers the plastic waste through the discharge opening 6 to the extruder screw 4, wherein at the same time the knives 3 of the shredding device 9 are moved past the extruder screw 4 at such a small distance "h" that effective shear gaps are formed between the knives 3 of the shredding device 9 and a helix 4a of the extruder screw 4. Due to these measures of the present invention, it has surprisingly been achieved to continuously supply appropriately cut plastic waste without having to use the sophisticated design suggested by Barth et al., i.e., without having to provide a processing drum with a first cutting part, a compacting part and a second cutting part with the function to prevent clogging of the discharge opening by compacted plastic waste material. The examiner respectfully

Art Unit: 1722

disagrees. All of these features or measures are disclosed by Barth et al., as mentioned above. The processing drum may have different portions or parts but still defines one shredding device.

Applicants argue that a further disadvantage of the device disclosed by Barth et al. is that the extruder is tangentially flanged downstream of the conveyer screw whereby the plastic waste material is always transported to the bearing at the discharge side, resulting in redirecting the compacted material at its entry into the extruder, which in turn results in an increased thermal decomposition. The examiner does not fully understand this argument because applicants have not indicated what elements in Barth et al. correspond to the tangential flange. However, in any case, the claims do not preclude a tangential flange.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1722

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Leyson whose telephone number is (571) 272-5061. The examiner can normally be reached on M-F 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gupta Yogendra can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
JL

  
ROBERT DAVIS  
PRIMARY EXAMINER  
GROUP 1300/200

6/19/07